

TRIM28 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11866A

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	Q13263
Other Accession	NP_005753.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB09760
Calculated MW	88550
Antigen Region	178-207

Additional Information

Gene ID	10155
Other Names	Transcription intermediary factor 1-beta, TIF1-beta, E3 SUMO-protein ligase TRIM28, 632-, KRAB-associated protein 1, KAP-1, KRAB-interacting protein 1, KRIP-1, Nuclear corepressor KAP-1, RING finger protein 96, Tripartite motif-containing protein 28, TRIM28, KAP1, RNF96, TIF1B
Target/Specificity	This TRIM28 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 178-207 amino acids from the N-terminal region of human TRIM28.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TRIM28 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TRIM28 (HGNC:16384)
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Synonyms	KAP1, RNF96, TIF1B
Function	<p>Nuclear corepressor for KRAB domain-containing zinc finger proteins (KRAB-ZFPs). Mediates gene silencing by recruiting CHD3, a subunit of the nucleosome remodeling and deacetylation (NuRD) complex, and SETDB1 (which specifically methylates histone H3 at 'Lys-9' (H3K9me)) to the promoter regions of KRAB target genes. Enhances transcriptional repression by coordinating the increase in H3K9me, the decrease in histone H3 'Lys-9 and 'Lys-14' acetylation (H3K9ac and H3K14ac, respectively) and the disposition of HP1 proteins to silence gene expression. Recruitment of SETDB1 induces heterochromatinization. May play a role as a coactivator for CEBPB and NR3C1 in the transcriptional activation of ORM1. Also a corepressor for ERBB4. Inhibits E2F1 activity by stimulating E2F1-HDAC1 complex formation and inhibiting E2F1 acetylation. May serve as a partial backup to prevent E2F1-mediated apoptosis in the absence of RB1. Important regulator of CDKN1A/p21(CIP1). Has E3 SUMO-protein ligase activity toward itself via its PHD-type zinc finger. Also specifically sumoylates IRF7, thereby inhibiting its transactivation activity. Ubiquitinates p53/TP53 leading to its proteasomal degradation; the function is enhanced by MAGEC2 and MAGEA2, and possibly MAGEA3 and MAGEA6. Mediates the nuclear localization of KOX1, ZNF268 and ZNF300 transcription factors. In association with isoform 2 of ZFP90, is required for the transcriptional repressor activity of FOXP3 and the suppressive function of regulatory T-cells (Treg) (PubMed:23543754). Probably forms a corepressor complex required for activated KRAS-mediated promoter hypermethylation and transcriptional silencing of tumor suppressor genes (TSGs) or other tumor-related genes in colorectal cancer (CRC) cells (PubMed:24623306). Required to maintain a transcriptionally repressive state of genes in undifferentiated embryonic stem cells (ESCs) (PubMed:24623306). In ESCs, in collaboration with SETDB1, is also required for H3K9me3 and silencing of endogenous and introduced retroviruses in a DNA-methylation independent-pathway (By similarity). Associates at promoter regions of tumor suppressor genes (TSGs) leading to their gene silencing (PubMed:24623306). The SETDB1-TRIM28-ZNF274 complex may play a role in recruiting ATRX to the 3'-exons of zinc- finger coding genes with atypical chromatin signatures to establish or maintain/protect H3K9me3 at these transcriptionally active regions (PubMed:27029610).</p>
Cellular Location	<p>Nucleus Note=Associated with centromeric heterochromatin during cell differentiation through CBX1 (By similarity). Localizes to sites of DNA damage (PubMed:25593309). {ECO:0000250 UniProtKB:Q62318, ECO:0000269 PubMed:25593309}</p>
Tissue Location	<p>Expressed in all tissues tested including spleen, thymus, prostate, testis, ovary, small intestine, colon and peripheral blood leukocytes.</p>

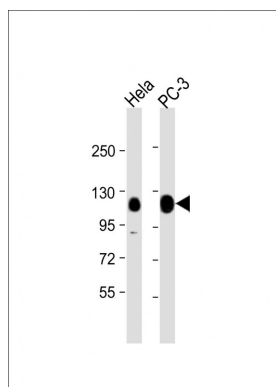
Background

The protein encoded by this gene mediates transcriptional control by interaction with the Kruppel-associated box repression domain found in many transcription factors. The protein localizes to the nucleus and is thought to associate with specific chromatin regions. The protein is a member of the tripartite motif family. This tripartite motif includes three zinc-binding domains, a RING, a B-box type 1 and a B-box type 2, and a coiled-coil region.

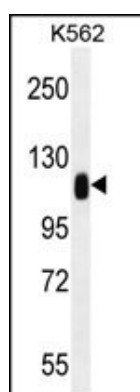
References

- Lai, I.L., et al. J. Biol. Chem. 285(10):7187-7196(2010)
 Yokoe, T., et al. Ann. Surg. Oncol. 17(3):821-828(2010)
 Noon, A.T., et al. Nat. Cell Biol. 12(2):177-184(2010)

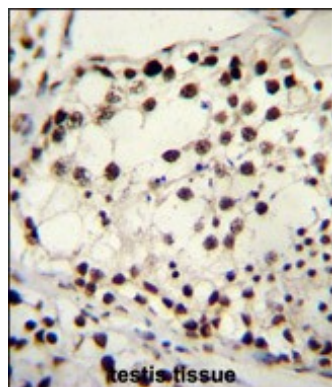
Images



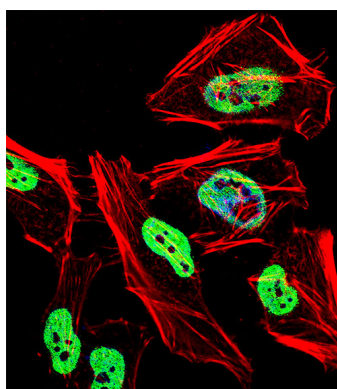
All lanes : Anti-TRIM28 Antibody (N-term) at 1:1000 dilution Lane 1: HeLa whole cell lysate Lane 2: PC-3 whole cell lysate Lysates/proteins at 20 μ g per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 89 kDa Blocking/Dilution buffer: 5% NFDN/TBST.



TRIM28 Antibody (N-term) (Cat. #AP11866a) western blot analysis in K562 cell line lysates (35ug/lane). This demonstrates the TRIM28 antibody detected the TRIM28 protein (arrow).



TRIM28 Antibody (N-term) (Cat. #AP11866a) immunohistochemistry analysis in formalin fixed and paraffin embedded human testis tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of TRIM28 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.



Fluorescent confocal image of HeLa cell stained with TRIM28 Antibody (N-term)(Cat#RB09760). HeLa cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with TRIM28 primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C). Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 μ g/ml, 10 min). TRIM28 immunoreactivity is localized to Nucleus significantly.